

## IEEE – Advancing Technology for Humanity

*A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.*

*Who is the Presenter ?*



### *Who is the Presenter ?*

- ▶ Former CEO, Delta Square International.
- ▶ Former Founder and Program Manager, Egypt IoT Challenge.
- ▶ Former Corporate Affairs Manager, Intel Corporation.
  
- ▶ IEEE member and volunteer since 2008.
- ▶ Co-founder and Executive Secretary, IEEE TEMS Egypt Chapter.
- ▶ Global Team Lead, IEEE Day 2012/2013.
- ▶ Web Activities Coordinator, IEEE R8 SAC 2011-2012.
- ▶ Student Representative, IEEE Egypt Section 2011-2013.
- ▶ Vice-chairman, IEEE Cairo University Student Branch 2009/2010.



# What is IEEE?

## *Meaning of I-E-E-E*

- ▶ IEEE, pronounced "Eye-triple-E," stands for the Institute of Electrical and Electronics Engineers. The association is chartered under this name and it is the full legal name.
- ▶ However, as the world's largest technical professional organization, IEEE's membership has long been composed of engineers, scientists, and allied professionals. These include computer scientists, software developers, information technology professionals, physicists, medical doctors, and many others in addition to IEEE's electrical and



# What is IEEE?

electronics engineering core. For this reason the organization no longer goes by the full name, except on legal business documents, and is referred to simply as IEEE.

## *History - Foundation of the AIEE*

- ▶ In the spring of 1884, a small group of individuals in the electrical professions met in New York, USA.
- ▶ They formed a new organization to support professionals in their nascent field and to aid them in their efforts to apply innovation for the betterment of humanity—the American Institute of Electrical Engineers, or AIEE for short. That October, the AIEE held its first technical meeting in Philadelphia, PA, USA. Many early leaders, such as founding President Norvin Green of Western Union, came from



# What is IEEE?

telegraphy. Others, such as Thomas Edison, came from power, while Alexander Graham Bell represented the telephone industry.

- ▶ Electric power spread rapidly, enhanced by innovations such as AC induction motors, long-distance AC transmission, and larger power plants. Companies such as AEG, General Electric, Siemens & Halske, and Westinghouse underwrote its commercialization.
- ▶ The AIEE became increasingly focused on electrical power and its ability to change people's lives through the unprecedented products and services it could deliver. There was a secondary focus on wired communication, both the telegraph and the telephone. Through technical meetings, publications, and promotion of standards, the AIEE led the growth of the electrical engineering profession, while through local sections and student branches, it brought its benefits to engineers in widespread places.

*History - Foundation of the AIEE*



# What is IEEE?



# What is IEEE?

Old AIEE Logo

Engineering Societies Building, 29 West 39th St., New York City

## *History - Foundation of the IRE*

- ▶ A new industry arose, Marconi's wireless 1895-1896. What was telegraphy became radio possibilities inherent in the



beginning with Guglielmo telegraphy experiments in originally called “wireless” with the electrical amplification vacuum tubes that evolved





# What is IEEE?

from John Fleming's diode and Lee de Forest's triode. With the new industry came a new society in 1912, the Institute of Radio Engineers.

- ▶ The IRE was modeled on the AIEE but was devoted to radio, and then broadly to electronics. It also furthered its profession by linking members through publications, standards, and conferences and encouraging them to organize local sections and meetings to exchange information and ideas.

*History - Foundation of the IRE*



# What is IEEE?



IRE Logo

# What is IEEE?

IRE Mosaic in the Society's Brokaw Mansion



# What is IEEE?

## *History - The societies converge and merge*

- ▶ Through the help of leadership from the two societies, and with the applications of its members' innovations to industry, electricity wove its way more deeply into every corner of life, through television, radar, transistors, and computers. Increasingly, the interests of the societies overlapped.
- ▶ Membership in both societies grew, but beginning in the 1940s, the IRE grew faster and in 1957 became the larger group. On January 01, 1963, the AIEE and the IRE merged to



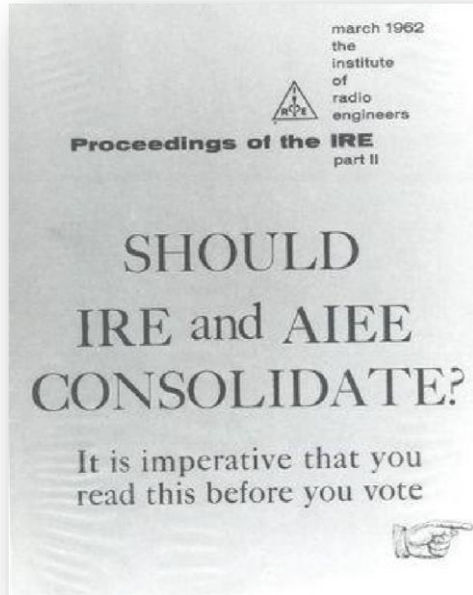
# What is IEEE?

form the Institute of Electrical and Electronics Engineers, or IEEE. At its formation, IEEE had 150,000 members, 140,000 of whom resided in the United States.



# What is IEEE?

*History - The societies converge and merge*



Special merger issue of the Proceedings of the IRE



Merger Symposium at 1962 IRE Convention



The badge of the new IEEE combined the right hand rule from the IRE and the kite from the AIEE



# What is IEEE?

## *IEEE Nowadays*

Nowadays, we can define IEEE as following:

- ▶ IEEE is the world's largest professional association advancing technology for the benefit of humanity.
- ▶ It publishes technical journals, sponsors conferences, develops technology standards, and supports the professional interests of more than 400,000 members.



# What is IEEE?

- ▶ IEEE creates an environment where members collaborate on world-changing technologies—from computing and sustainable energy systems to aerospace, communications, robotics, and healthcare—to engineer a better tomorrow.

*Nowadays, IEEE comprised over 420,000 members in 160 countries. Through its global network of geographical units, publications, web services, and conferences, IEEE remains the world's largest technical professional association.*





# IEEE at a Glance

## IEEE Global Reach



# IEEE Membership Grades

► You can join IEEE at: [iee.org/join](https://iee.org/join) ►

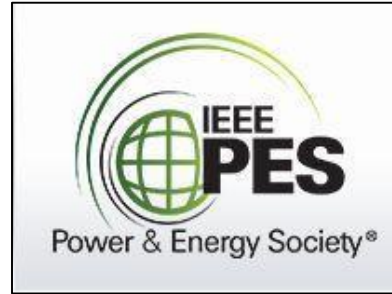
## Membership grades:

- Student Member
- Graduate Student Member
- Member
- Senior Member
- Fellow



- Life Member

# Special Interest Memberships





► IEEE Society Membership ► IEEE Standards Association

► Affinity Groups:

- Young Professionals
- Women in Engineering
- Life Members

**Stay Technically Current**

► Subscriptions to:



- IEEE Spectrum
- The Institute

► Discounts on

- IEEE Xplore Articles
- IEEE-Wiley eBooks
- IEEE Events & Conferences
  - IEEE.tv - IEEE's Internet television network

# Professional Networking



- ▶ Local Section, Society Chapter and Student Branch Meetings & Events
- 

▶ IEEE Collabratec™

- ▶ Volunteering



# Career Development & Services

- ▶ IEEE JobSite w/ Career Alert

- ▶ IEEE Mentoring via [IEEE Collabratec™](#)
- ▶ IEEE ResumeLab
- ▶ [IEEE Awards & Recognition](#)

## Continuing Education

- ▶ [Continuing Education Partners Program](#)
- ▶ Discounted Pricing for [IEEE Conferences and Events](#) ▶ Online Training



**IEEE**  
**ResumeLab**



- [IEEE eLearning Library](#)
- [IEEEEx offered by edX](#)

► Earn Continuing Education Units (CEUs) & Professional Development Hours (PDHs)

### IEEE Xplore Title List - Educational Courses

Browse Alphabetically  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

To create a link from your Online Public Access Catalog (OPAC), insert the number at the end of the standard URL prefix. For example:  
<http://ieeexplore.ieee.org/xpls/opa?pubnumber=7> You may also copy and paste the URL directly from the OPAC Link column listed below.

Course Title	Module#	Publication Date	Duration	ISBN#	Subject Category	Presented At	OPAC Link
A Primer on Cluster Analysis I: Models and Algorithms	EW1073	12/18/2008		1-4244-1440-7	Bioengineering		<a href="http://ieeexplore.ieee.org/xpls/opa?pubnumber=EW1073">http://ieeexplore.ieee.org/xpls/opa?pubnumber=EW1073</a>
A Primer on Clustering: II: Tendency Assessment and Cluster Validity	EW1074	12/18/2008		1-4244-1441-5	Bioengineering		<a href="http://ieeexplore.ieee.org/xpls/opa?pubnumber=EW1074">http://ieeexplore.ieee.org/xpls/opa?pubnumber=EW1074</a>
A Primer on Clustering: III: (Modest) Fuzzy Clustering in Very Large Data Sets	EW1075	1/12/2009					

### Conferences & Events

IEEE sponsors more than 1,000 annual conferences and meetings worldwide. IEEE is also highly involved in the technical program development of numerous events including trade events, training workshops, job fairs, and other programs.

For more information about an IEEE conference, search the IEEE conference database below.

#### Search Conferences

Keywords, Title, Conf #, etc.

Select type & date range

☒ Conference date  
☐ Call for papers

From:

To:

Location

IEEE region  
 (select a region (optional))

Or country/region  
 (select a country (optional))

#### Featured conferences and events

2015 IEEE Live Panel via Google Hangout  
 28 October 2015 (3:00pm ET / 12:00pm PT / 7:00pm GMT) | Piscataway, NJ, USA

2015 IEEE International Conference on Smart Grid Communications (SmartGridComm)  
 2 November - 5 November 2015 | Miami, FL, USA

IEEE Innovative Smart Grid Technologies - Asia (ISGT ASIA)  
 4 November - 6 November 2015 | Bangkok, Thailand

2015 IEEE Women in Engineering (WIE) Summit USA East  
 8 November - 8 November 2015 | Philadelphia, PA, USA

#### On this Page:

- Featured conferences and events
- Running an IEEE conference
- Conference publications
- Calls for papers
- Local meetings and events

# Member Discounts/Reduced Rates



**Sponsored Insurance and Discount Programs for Members**

<b>Life, Health &amp; Business Insurance</b> for US, Puerto Rico & Canada <b>IEEE Member Group Insurance Program</b> IEEEInsurance.com	<b>International Life Insurance</b> • No Medical exams for \$500,000 • Coverage up to \$4 Million • Special rate for IEEE Members <b>Clements</b> worldwide	<b>Switch and you could save*</b> <b>GET A QUOTE</b> <b>Liberty Mutual</b> INSURANCE	<b>TRAVELERS</b> IEEE MEMBERS COULD <b>save hundreds</b> <b>GET A QUOTE</b>
For US, Canada & Puerto Rico	Excluding US, Canada & Puerto Rico	Auto & home insurance (US)	Auto & home insurance (US)

Please sign in with your IEEE Account to view program details

**IEEE**

▶ Reduced rates on IEEE Products

- As much as 50% off

▶ Member Discounts\* on:

- Financial Services
- Insurance Services
- Home & office Services
- Travel Services

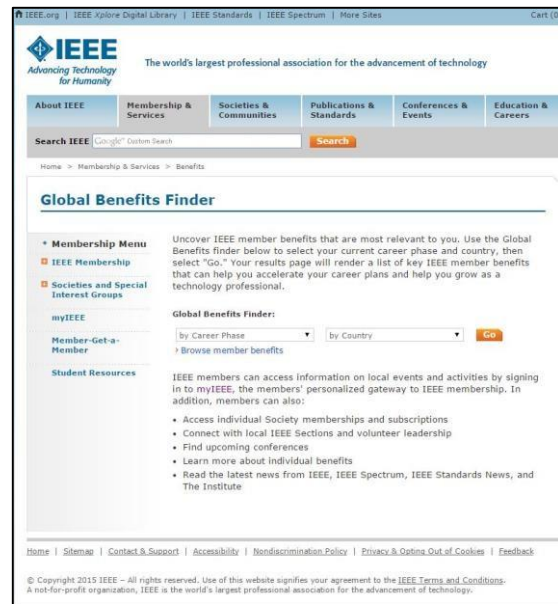
\* Benefits vary by country

# IEEE Global Benefits Finder

- ▶ Access all of the benefits in previous slides
- ▶ Broken down by
  - Career Phase
  - Country ▶ 90+ Benefits for US Members
- ▶ [www.ieee.org/benefits](http://www.ieee.org/benefits)

## Your Local Member Experience

*IEEE Local Volunteer & Member Efforts – Egypt as an example*



- ▶ IEEE Section: **Egypt** ([www.IEEE.org.eg](http://www.IEEE.org.eg))
- ▶ **40** Student Branch: **ex. Cairo University Student Branch** ([www.IEEECUSB.org](http://www.IEEECUSB.org)) ▶
- 14** Technical Societies Chapters, including:





### 3 Affinity Groups:



► **Want to see more of the IEEE Member Experience?**

► [IEEE.tv Membership Experience Channel](#) ►

Follow us on Social Media:





**@IEEEExp IEEE Membership**

**facebook**

# Appendix

# Important IEEE Links

## IEEE Main Website



- [www.ieee.org](http://www.ieee.org)

## IEEE Membership and Subscriptions



- [www.ieee.org/membership](http://www.ieee.org/membership)
- [www.ieee.org/students](http://www.ieee.org/students)

# Important IEEE Links

IEEE Societies and Communities -

[http://www.ieee.org/societies\\_communities](http://www.ieee.org/societies_communities)

[es](#)



IEEE Region and Section Website Access



- [https://www.ieee.org/societies\\_communities/geo\\_activities/regional\\_world\\_map.html](https://www.ieee.org/societies_communities/geo_activities/regional_world_map.html)

IEEE Conferences and Events



# Important IEEE Links

- [http://www.ieee.org/conferences\\_events](http://www.ieee.org/conferences_events) - <https://events.vtools.ieee.org/>

## IEEE Publications



- [http://www.ieee.org/publications\\_standards](http://www.ieee.org/publications_standards)

## IEEE Standards -

<http://standards.ieee.org/>



# Important IEEE Links

## IEEE Education Resources

- ▶
  - [http://www.ieee.org/education\\_careers/index.html](http://www.ieee.org/education_careers/index.html)

## Humanitarian and Philanthropic Activities

- ▶
  - [www.ieee.org/doing-good](http://www.ieee.org/doing-good)

## IEEE Young Professional

- ▶
  - [yp.ieee.org](http://yp.ieee.org)

# Important IEEE Links

## IEEE Women in Engineering



- [wie.ieee.org](http://wie.ieee.org)

## IEEE-USA



- <https://ieeeusa.org>